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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,301	07/10/2003	Yoav Kimchy	25854	1622

7590 12/13/2007

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EXAMINER	
CHAO, ELMER M	

ART UNIT	PAPER NUMBER
3737	

MAIL DATE	DELIVERY MODE
12/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/616,301	KIMCHY ET AL.	
	Examiner	Art Unit	
	Elmer Chao	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Acknowledgement is made of the amendment filed 10/31/2007.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2007 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-4 and 6-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-4, 6, and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassan in view of Barrett et al (U.S. 4,595,014) and Schentag (U.S. 5,279,607), and in further view of Glukhovsky (U.S. 6,584,348).

Regarding claims 1, 2, and 6, Hassan teaches "A Radiotelemetry Pill for the Measurement of Ionising Radiation using a Mercuric Iodide Detector" (title). Regarding claim 1, Hassan teaches that "the radiation pill consists of a mercuric iodide crystal, amplifier, transmitter, and a 1.35V battery" (last paragraph, pg. 303). Hassan teaches of "the pill's plastic encapsulation" (last paragraph, pg. 306). Regarding claim 2, Hassan teaches that the "radiopill can also serve as a general purpose telemetric γ-ray detector" (last paragraph, pg. 302). Hassan teaches that "The radiopill was also tested as a beta detector" (first paragraph, pg. 307).

Hassan substantially discloses all the limitations as discussed above. Hassan does not disclose an ingestible device with a plurality of nuclear-radiation detectors arranged on the external surface of the ingestible device. However, Barrett ('014) teaches a nuclear radiation probe that includes multiple radiation detectors (C3, L51-53). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hassan to create an ingestible device with a plurality of nuclear-radiation detectors. Such a modification would help increase the area imaged are by not requiring the device to rotate fully in order to image the surrounding area (C3, L62-67). Glukhovsky ('348) teaches a capsule with electrode probes protruding out from openings of the capsule (Figure 2A). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hassan in view of Barrett

('014) to include a plurality of nuclear radiation detectors arranged around the external surface of the ingestible device. Such a modification would improve the sensitivity of the probes by not enclosing them by an encapsulation that could potentially attenuate the detectable radiation.

Hassan, Barrett ('014), and Glukhovsky ('348) teach the limitations as discussed above but fail to explicitly teach the system comprising circuitry adapted to determine the location of the ingestible device and reconstruct the diagnostic image based on the location. However, Schentag ('607) teach means necessary to perform the wireless tracking and signal transmission of telemetry capsules (col. 2, line 64 – col. 3, line 28; col. 8, line 66 - col. 9, line 38). Additionally, Barrett ('014) do teach a radiation imaging probe and a system capable of detecting the location of the probe and to reconstruct an image based on the location (abstract; col. 1, line 63 – col. 2, line 15). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hassan, Barrett ('014), and Glukhovsky ('348) to include circuitry capable of sensing location and reconstructing a diagnostic image based on said location in order to allow for the position and the strength of the source of a tumor to be determined in the presence of background radiation (for motivation see Barrett ('014) col. 2, lines 16-22).

Regarding **claims 3 and 4**, Hassan teaches that "the sensitivity of the pill has been found for $^{99}Tc^{m}$, ^{131}I and ^{32}P" (abstract).

Regarding **claim 7**, Hassan does not teach the radiotelemetry pill with a collimator, nor does it even hint at the mercuric iodide crystal being collimated.

6. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassan in view of Barrett et al., further in view of Glukhovsky, further in view of Zhang et al. (Society of Nuclear Medicine, June 2000). Hassan, Barrett et al., and Glukhovsky substantially disclose all the limitations as discussed above. They do not disclose an ingestible device arranged as a Compton camera. However, Zhang teaches a transrectal imaging probe based on Compton camera techniques (No. 68, second sentence). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hassan to include a Compton camera probe as evidenced by Zhang. Such a modification would allow the ingestible device to have high sensitivity and high resolution (No. 68, second sentence).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmer Chao whose telephone number is (571)272-0674. The examiner can normally be reached on 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EC
12/9/2007